

WHAT IS CLAIMED IS:

1. A method of preparing 2-deoxyribose  
5-phosphate, comprising:

5 reacting glyceraldehyde 3-phosphate and  
acetaldehyde, in the presence of either a microorganism  
itself which contains 2-deoxyribose-5-phosphate  
aldolase but substantially no phosphatase or the enzyme  
derived from the microorganism.

2. A method of preparing 2-deoxyribose  
10 5-phosphate, comprising:

reacting dihydroxyacetone phosphate and  
acetaldehyde, in the presence of either a microorganism  
itself which contains 2-deoxyribose-5-phosphate  
aldolase and triose-phosphate isomerase but  
15 substantially no phosphatase or the enzymes derived  
from the microorganism.

3. A method of preparing 2-deoxyribose  
5-phosphate according to claim 1, wherein said  
microorganism is a microorganism which belongs to  
20 Enterobacteriaceae.

4. A method of preparing 2-deoxyribose  
5-phosphate according to claim 2, wherein said  
microorganism is a microorganism which belongs to  
Enterobacteriaceae.

25 5. A method of preparing 2-deoxyribose  
5-phosphate, comprising:

reacting glyceraldehyde 3-phosphate and

acetaldehyde, in the presence of either a microorganism itself which belongs to *Klebsiella* genus and contains 2-deoxyribose-5-phosphate aldolase or the enzyme derived from the microorganism.

- 5           6. A method of preparing 2-deoxyribose 5-phosphate, comprising:

          reacting dihydroxyacetone phosphate and acetaldehyde, in the presence of either a microorganism itself which belongs to *Klebsiella* genus and contains  
10       2-deoxyribose-5-phosphate aldolase and triose-phosphate isomerase or the enzymes derived from the microorganism.

          7. A method of preparing 2-deoxyribose 5-phosphate according to claim 1, wherein said microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

- 15           8. A method of preparing 2-deoxyribose 5-phosphate according to claim 3, wherein said microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

          9. A method of preparing 2-deoxyribose 5-phosphate according to claim 5, wherein said  
20       microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

          10. A method of preparing 2-deoxyribose 5-phosphate according to claim 2, wherein said microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

          11. A method of preparing 2-deoxyribose  
25       5-phosphate according to claim 4, wherein said microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

          12. A method of preparing 2-deoxyribose

5-phosphate according to claim 6, wherein said microorganism is *Klebsiella pneumoniae* B-44 (IFO 16579).

13. *Klebsiella pneumoniae* B-44 (IFO 16579), which is capable of producing 2-deoxyribose-5-phosphate aldolase and triose-phosphate isomerase but  
5 substantially no phosphatase.